

Appl. No. 09/738,766  
Amendment in response to  
Office Action mailed 07/15/2003

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): A coniferous tree seedling plug for use in re-planting coniferous forests comprising a coniferous tree seedling having roots, and a cylindrical plug of growing medium surrounding said roots, wherein said growing medium comprises a plurality of thermal-sensitive fibres which have been heat-treated to form an interconnected fibrous network, wherein said coniferous tree seedling is 6.5 months or less in age and said tree seedling plug is suitable for re-planting coniferous forests.

Claim 2 (previously amended): The tree seedling plug of claim 1 wherein said growing medium comprises a loose growing soil mixture consisting of approximately 95% by weight coconut coir fibre, and 5% by weight of thermal-sensitive fibre

Claim 3 (currently amended): A coniferous tree seedling plug for use in re-planting coniferous forests comprising a coniferous tree seedling having roots, and a first generally cylindrical plug of a first growing medium surrounding said roots, wherein said first growing medium comprises a plurality of thermal-sensitive fibres which have been heat-treated to form an interconnected fibrous network, and further comprising a second cylindrical plug of a second growing medium surrounding the outer and lower surfaces of said first cylindrical plug wherein said coniferous tree seedling is 6.5 months or less in age and said tree seedling plug is suitable for re-

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planting coniferous forests.

Claim 4 (previously amended): The tree seedling plug of claim 3 wherein said first growing medium comprises a loose growing soil mixture consisting of approximately 95% by weight coconut coir fibre, and 5% by weight of thermal-sensitive fibre.

Claim 5 (original): The tree seedling plug of claim 3 wherein said second growing medium comprises a loose growing soil mixture comprising peat moss and sawdust.

Claim 6 (currently amended): A method of forming a coniferous tree seedling plug for use in re-planting coniferous forests comprising

- i) filling a hollow cell with a growing medium wherein said growing medium comprises a plurality of thermal-sensitive fibres;
- ii) heat-treating said thermal-sensitive fibres to form an interconnected fibrous network within said growing medium;
- iii) planting a coniferous tree seed in said hollow cell;
- iv) germinating said coniferous tree seed into a seedling and nurturing said seedling to provide root development;
- v) after sufficient root development of said seedling has occurred and after 6.5 months or less, ejecting said seedling and growing medium to form said coniferous tree seedling plug.

Claim 7 (previously amended): The method of claim 6 wherein said growing medium comprises a loose growing soil mixture consisting of approximately 95% by weight coconut coir fibre, and 5% by weight of thermal-sensitive fibre.

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**Claim 8 (currently amended):** A method of forming a coniferous tree seedling plug for use in re-planting coniferous forests comprising:

- i) forming a first generally cylindrical plug of a first growing medium wherein said first growing medium comprises a network of thermal-sensitive fibre, by
  - a) filling a hollow cell with a growing medium wherein said growing medium comprises a plurality of thermal-sensitive fibres;
  - b) heat-treating said thermal-sensitive fibres to form an interconnected fibrous network within said growing medium;
  - c) planting a coniferous tree seed in said hollow cell;
  - d) germinating said coniferous tree seed into a seedling and nurturing said seedling to provide root development;
  - e) after sufficient root development of said seedling has occurred and after 6.5 months or less, ejecting said seedling and growing medium to form said first cylindrical plug;
- ii) transplanting said first generally cylindrical plug into a hollow cell with a growing medium wherein said growing medium comprises a plurality of thermal-sensitive fibres which have been heat-treated to form an interconnected fibrous network;
- iii) after sufficient root development of said seedling has occurred, ejecting said seedling and growing medium to form said coniferous tree seedling plug.

**Claim 9 (currently amended):** A method of forming a coniferous tree seedling plug for use in re-planting coniferous forests comprising:

- i) forming a first generally cylindrical plug of a first growing medium wherein said first growing medium comprises a network of thermal-

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sensitive fibre, by

- a) filling a hollow cell with a growing medium wherein said growing medium comprises a plurality of thermal-sensitive fibres;
  - b) heat-treating said thermal-sensitive fibres to form an interconnected fibrous network within said growing medium;
  - c) planting a coniferous tree seed in said hollow cell;
  - d) germinating said coniferous tree seed into a seedling and nurturing said seedling to provide root development;
  - e) after sufficient root development of said seedling has occurred, ejecting said seedling and growing medium to form said first cylindrical plug;
- ii) transplanting said first generally cylindrical plug into a hollow cell with a growing medium wherein said growing medium comprises a second growing medium;
- iii) after sufficient root development of said seedling has occurred and after 6.5 months or less, ejecting said seedling and growing medium to form said coniferous tree seedling plug.

Claim 10 (original): The method of claim 8 wherein said first growing medium comprises a loose growing soil mixture consisting of approximately 95% by weight coconut coir fibre, and 5% by weight of thermal-sensitive fibre.

Claim 11 (canceled):

Claim 12 (previously amended): The method of claim 9 wherein said second growing medium a loose growing soil mixture comprising peat moss and sawdust

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Claim 13 (previously amended): The method of claim 6 wherein said growing medium comprising a network of thermal-sensitive fibre is formed by filling a tray of hollow cells with said growing medium, dipping said tray in a bath of hot water at a temperature of approximately 89 degrees Celsius, and then dipping said tray in a bath of water at tap water temperature, 5 to 10 degrees Celsius.

Claim 14 (previously amended): The method of claim 6 wherein said growing medium comprising a network of thermal-sensitive fibre is formed by filling a tray of hollow cells with said growing medium, and alternatively cascading water onto the tray to heat and cool the tray.

Claim 15 (canceled):

Claim 16 (canceled):

Claim 17 (canceled):

Claim 18 (canceled):

Claim 19 (canceled):

Claim 20 (previously presented): The tree seedling plug of claim 3 wherein said second growing medium comprises a network of thermal-sensitive fibre.

Claim 21 (previously presented): The tree seedling plug of claim 20 wherein said second growing medium comprises a loose growing soil mixture consisting of approximately 95% by weight coconut coir fibre, and 5% by weight of thermal-

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sensitive fibre.

Claim 22 (previously presented): The method of claim 8 wherein said first growing medium comprising a network of thermal-sensitive fibre is formed by filling a tray of hollow cells with said growing medium, dipping said tray in a bath of hot water at a temperature of approximately 89 degrees Celsius, and then dipping said tray in a bath of water at tap water temperature, 5 to 10 degrees Celsius.

Claim 23 (previously presented): The method of claim 8 wherein said first growing medium comprising a network of thermal-sensitive fibre is formed by filling a tray of hollow cells with said growing medium, and alternatively cascading water onto the tray to heat and cool the tray.

Claim 24 (previously presented): The method of claim 9 wherein said first growing medium comprising a network of thermal-sensitive fibre is formed by filling a tray of hollow cells with said growing medium, dipping said tray in a bath of hot water at a temperature of approximately 89 degrees Celsius, and then dipping said tray in a bath of water at tap water temperature, 5 to 10 degrees Celsius.

Claim 25 (previously presented): The method of claim 9 wherein said first growing medium comprising a network of thermal-sensitive fibre is formed by filling a tray of hollow cells with said growing medium, and alternatively cascading water onto the tray to heat and cool the tray.

Claim 26 (new): The tree seedling plug of claim 1 wherein said coniferous tree seedling is 6 months old or less.

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Claim 26 (new): The tree seedling plug of claim 3 wherein said coniferous tree seedling is 6 months old or less.

Claim 27 (new): The method of claim 6 wherein said seedling and growing medium are ejected after 6 months or less.

Claim 28 (new): The method of claim 6 wherein said seedling and growing medium are ejected after 6 months or less.

Claim 29 (new): The method of claim 6 wherein said seedling and growing medium are ejected after 6 months or less.